

# Simple blood test at high street opticians could help to diagnose diabetes

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A simple finger prick test during routine eye examinations at high street opticians could help to identify millions of people with previously undiagnosed Type 2 diabetes, according to new research.

The researchers suggest earlier diagnosis could set people on the road to better management of the disease, which is the leading cause of blindness in the working age population, and that this could ultimately result in cost-savings for the NHS.

The Durham University study suggests that screening for the condition in unconventional settings, such as opticians, chiropodists or dentists, could find those people who would not routinely visit their GP, and could have potential worldwide.

It is estimated that 150 million people worldwide have diabetes but up to 50 per cent of people who have the condition are thought to be undetected and may only be diagnosed when complications occur.

It has already been shown that pharmacies and chiropodists have the capacity to carry out simple blood tests to identify [Type 2 diabetes](#). The researchers say other places such as dentists could potentially be used to offer the test.

The [pilot study](#), carried out by Durham University and The James Cook University Hospital in Middlesbrough, focused on opticians and the findings are published in the *British Journal of General Practice*.

It found that out of 1,000 people visiting their opticians for an eye test who were found to have one or more risk factors of diabetes, such as increased [body mass index](#) or aged over 40, almost 32 per cent were referred to their GP for further investigation after having their blood glucose levels checked.

The researchers say high street opticians are an under-utilised resource in the efforts to identify the large numbers of people with undiagnosed diabetes.

Currently, most screening for diabetes is carried out in medical settings, mostly by [family doctors](#), but there are many people who do not visit their GP for preventative care, even if they are in an at-risk group.

While optometrists have an established role in screening people with known diabetes for eye disease, they are presently not involved in identifying diabetes.

Lead author and former optician, Dr Jenny Howse from Durham University's School of Medicine and Health, said: "Charities' campaigns have managed to reduce the proportion of people with undiagnosed diabetes but there is still a 'hard-to-reach' group who remain undiagnosed. Opticians could provide routine, non-emergency care and the simple screening can be done outside usual [medical settings](#), such as GP surgeries."

In the study, which involved five high street optometry practices, people were asked a number of questions to identify any diabetes risk factors. If they had one or more, optical assistants conducted a simple finger prick test, called a random capillary blood glucose (rCBG) test, to assess the blood glucose levels.

In keeping with current Royal Pharmaceutical Society and Diabetes UK

guidelines for screening in pharmacies, those with raised [blood glucose levels](#) were advised to visit their GP for further investigations.

Dr Howse said: "The screening test is less invasive and time consuming than fasting blood glucose and oral glucose tolerance tests.

"Already pharmacists and chiropodists have shown it is feasible to offer screening in their practices, here in the UK as well as in Australia and Switzerland. In the US, 60 per cent of adults visit dentists at least once a year for standard check-ups and those practices could be suitable locations to screen for diabetes.

"In the UK, our initial results show screening for diabetes in opticians is a feasible option but we now need to look at the practicalities of delivering it, including liaison between opticians and GPs and the time costs for opticians."

Type 2 diabetes is the most common type of diabetes and the risk of developing it increases as you get older. It develops when the body does not produce enough insulin to maintain a normal blood glucose level, or when the body is unable to effectively use the insulin that is being produced.

The study was set in five optometry practices of different sizes and locations in northern England with 1,002 people taking part in the research. 318 people had random capillary [blood glucose](#) (rCBG) levels of 6.1 or higher and so were advised to see their doctor for further tests and five had a rCBG of 12.1 or more who were told to see their GP urgently. 162 people took the advice and went to see their GP, and of these 138 reported they were investigated further. Nine people were diagnosed with pre-diabetes and seven with diabetes.

The research received funding from the Francis J Bell Fund, County

Durham Community Foundation.

## CASE STUDY

Faye McDermid is an optometrist who works at Campbell & McDermid Optometrists in Redcar and at The James Cook University Hospital in Middlesbrough. Her practice took part in the university research.

Faye said: "Blindness is devastating and irreversible, and diabetic retinopathy is currently the leading cause of blindness in people of working age in the UK. As an optometrist practicing in the community and in the hospital, I regularly see the detrimental effects this can have on the patient and their family and friends. Given that up to 60% of people with type 2 diabetes have a significant degree of retinopathy at the time of diagnosis, I feel that earlier detection is crucial.

"The value of screening by optometrists stems from the fact that we have regular contact with members of the community. We have the opportunity to offer and deliver this service in the privacy of the consulting room and we already have existing, regular communication links with local GPs.

"When a person comes for a sight test they are told that part of the [eye test](#) is to look for signs of general health disease, like [diabetes](#) or high blood pressure. While patients are with us in the practice, it's a great opportunity to offer further health screening where appropriate.

"Although screening is something which could be offered by optometrists for the benefit of patients, it would require funding as an enhanced service which is currently not available."

Provided by Durham University

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